

BACHELOR OF PRINTING ENGINEERING EXAMINATION, 2017

(3rd Year, 1st Semester, Supplementary)

Packaging Technique - II

Time : Three hours

Full Marks : 100

Answer any *five* questions.

1. (a) Discuss about the possible hazards during distribution of packaged items.
(b) Why assessment of journey hazards is necessary?
12+8=20

2. (a) How can you find the thickness of a particular cushion being used more efficiently for good cushioning design in a package? Is it at all necessary and why?
(b) Distinguish between impact load factor and cushion factor.
14+6=20

3. (a) Describe the effect of dampening and transmissibility on the shipping container for the effective isolation of vibratory forces emanating from a freight car to which the container is rigidly attached.
(e) What is the relation between the packaging cost and loss through damage during transport and handling system? Describe the effect of technological development in an improved packaging material on it.
10+10=20

4. (a) Draw the arrangement of roller conveyor for carrying rectangular shaped box packages and round shaped packages. Also mention the design parameters of the conveyor by showing in the diagram.
(b) What will be the arrangement of the rollers for conveying very small packaged items/
10+5=20

5. (a) How the nature of the packaged products changes by the influence of moisture?
(b) How can you compare the efficiencies of two or more packages of the same product?
10+10=20

6. How can you determine the half-value period of a moisture sensitive packaged product? Is it the shelf life of the packaged product at service conditions? If not, how can you determine this life?

20

7. (a) Describe the working principle of an accelerometer with a neat sketch. How can you use it during drop testing of a packaged article.

(b) For investigational testing of a package of size 45cm x 38cm x 30cm weighing 60 kg gross and holding 60 cartons in two layers arranged in 6x5. Each carton having glass bottles, stoppers of which are pointed towards 45cm x 38cm face.

i) Show the above arrangement with a neat sketch.

ii) How many positions of falls can be made during drop test? Mention the positions.

10+10=20

8. Write short notes on

(a) Inclined impact tester

(b) Use of desiccant in packaging

(c) Hermetically sealed container

(d) Critical Moisture content

4x5=20